### CURRICULUM VITAE: Irwin Monroe Arias, MD

#### **EDUCATION**

1946 – S.B. (Honors) - Harvard University, Cambridge, MA

1947 – 1948 Columbia University, Graduate School of Arts and Sciences (protein biochemistry)

1952 – MD, State University of New York, Downstate Medical Center

1951 – Elected to Alpha Omega Alpha (President, 1952)

#### POSTGRADUATE TRAINING

1952 – 1954 Intern and Assistant Resident in Medicine Fourth Medical Service (Harvard) Boston City Hospital, Boston, MA

1954 – 195 5 Fellow in Hematology, Boston City Hospital (Harvard) – Boston, MA

1955 – 1956 USPHS Fellow in Gastroenterology/Liver Disease, Second & Fourth

Medical Services (Harvard) Boston City Hospital, Boston, MA

#### **FACULTY POSITIONS**

Albert Einstein College of Medicine, New York, NY

1956 – 1984 Assistant Professor to Professor of Medicine

1956 – 1984 Attending Physician Bronx Municipal Hospital Center, NY

1967 – 1984 Chief, Division of Gastroenterology and Liver Disease

1973 – 1984 Vice-chairman for Academic Affairs, Department of Medicine

1984 – 2001 Visiting Professor of Medicine

### 2011 - present- Professor of Medicine, Emeritus

Tufts University School of Medicine

1984-2002 Professor and Chairman, Department of Cellular and Molecular Physiology -

1984 – 2002 Professor of Medicine, Tufts/New England Medical Center

## 2007 – present- Professor of Physiology and of Medicine, Emeritus National Institutes of Health

2000 – present, Assistant to the Director of NIH, Intramural Program 2000 – present, Director, NIH Course on "Demystifying Medicine for PhD" for students, fellows and Investigators, now in 11<sup>th</sup> year with ~900 NIH registered participants per year. Course replicated in 16 North American institutions and 15 foreign countries

#### 2007 - present, Senior Scientist, Emeritus NICHD, NIH

- 2. 1967 1984: Director and Principal Investigator of NIDDK Training Grant in Gastroenterology
- 3. **1974 1984 Founding Director of NIDDK Liver Research Center**. The Einstein Liver Center was the first to be funded by NIH, consists of collaborating RO-1-funded investigators in many basic and clinical science departments, and has been highly productive in bridging basic sciences with diagnosis, mechanisms and treatment of liver disease.

Tufts University School of Medicine

# 1981 – 1986 Founding Editor, Hepatology (official journal of the American Association for the Study of Liver Diseases)

1995 – 1997 Physiological Reviews

### 1976 Vice-President American Society for Clinical Investigation 1975 – 1976 President, American Association for the Study of Liver Diseases

B. AWARDS

1958 - Vincent Lyons Award, American Gastroenterological Association

# 1961 – Distinguished Achievement Award, American Gastroenterological Association -

- 1961 Distinguished Commendation Medal in Medicine, University of Recife, Brazil
- 1963 Annual Honorary Medical Award, University of Chile
- 1964 Citation in Science, University of Caracas, Venezuela

## 1965 - Distinguished Achievement Award, American College of Gastroenterology

### 1967 – Distinguished Achievement Award, Canadian Gastroenterological Association

### 1973 – Albert Einstein College of Medicine, Annual Distinguished Lecturer

- 1978 International Association for the Study of Liver Disease
- 1982 Fogarty Center Scholar-in-Residence, National Institutes of Health

## 1987 – 1995 MERIT Award, National Institute of Diabetes, Digestive and Kidney Diseases, NIH

- 1988 Japanese Association for the Study of Liver Disease
- 1989 1993 University Professor, University of Firenze, Italy
- 1990 American Liver Foundation Special Tribute

# 1990 – present Annual Irwin M. Arias, MD Symposium: "Bridging Basic Science with Liver Disease," established by the American Liver Foundation (in its 22<sup>nd</sup> year)

- 1992 present Annual Irwin M. Arias, MD Postdoctoral Fellowship Award, American Liver Foundation (in its 20<sup>th</sup> year)
- 1994 Distinguished Achievement Award, American Association for the Study of Liver Disease
- 1996 Distinguished Faculty Award, Tufts University, Boston, MA
- 1997 Ukrainian National Research Academy, Honorary member
- 1998 Distinguished Scientific Achievement Award, Asian-Pacific Association for Study of Liver Disease

### 1998 – Distinguished Scientific Achievement Award, American Liver Foundation

- 1998 Horace Davenport Achievement Award and Lecturer, American Physiological Society
- 2001 Fogarty Center Scholar-in-Residence, National Institutes of Health
- 2004 Annual Irwin M. Arias, MD Research Fellowship by the American

Gastroenterological Association

2009 – Inauguration of the Irwin M. Arias, MD Annual Symposium on "Bridging basic science and liver disease," Mexican Academy of Sciences

2010 - Elected to Honorary Membership, Mexican Academy of Medicine

### 2012 - Distinguished Alumnus Achievement Award, Downstate Medical School

#### A. EDUCATION, PhD SCIENTISTS TO STUDY HUMAN DISEASES

- 1. <u>Arias IM</u> (1989) Training basic scientists to bridge the gap between basic science and its application to human disease. *New Engl J Med* 321:972-964.
- 2. Arias IM (2004) Bridging the Bed-Bench Gap. National Research Council 45-60.
- 3. Arias IM (2003) Bridging basic science and medicine. Research America 3:56-58.
- 4. Arias IM (2009) Need for a bridge and how to build it. The NIH Catalyst 17: No 4.
- 5. <u>Arias IM</u> (2012) Eighteen-year analysis of outcomes of a program training basic scientists in pathobiology (in review).

#### B. BIOMEDICAL RESEARCH

Dr. Arias' discoveries of mechanisms of inheritable jaundice, that ABC transporters mediate bile transport, and that AMP kinase and Liver Kinase-B1 regulate hepatocyte polarization, mitochondrial fusion, ATP production, and bile transporters established new paradigms for biliary secretion and led to molecular identification of inheritable liver diseases.. Equally important, Dr. Arias is the acknowledged founder of the field of pathobiology education for Ph.D.'s and the "Demystifying Medicine for PhDs" Course he developed at NIH has become national and global.

378 peer-reviewed articles, edited 10 books and many reviews and book chapters.